R E P O R T R E S U M E S

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INSTITUTIONAL STUDIES OF JUNIOR COLLEGE STUDENTS.

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JUNIOR COLLEGE RESEARCH IS TYPICALLY "INSTITUTIONAL" WITH APPLICABILITY ONLY TO THE SPECIFIC INSTITUTION. MOST REPORTS RECEIVED AT THE CLEARINGHOUSE DESCRIBE COMPARATIVE STUDIES OF POPULATIONS (ENTIRE CLASSES, STUDENT BODIES, ETC.) INVOLVING NO SAMPLING PROCESSES. DATA WERE COMMONLY COLLECTED THROUGH RECORDS SEARCHES AND PRESENTED IN FREQUENCY COUNTS AND TABLES, WITH LITTLE ANALYSIS. PROCEDURAL IMPROVEMENTS ARE NEEDED. (1) TO PERMIT COMPARISONS, SEVERAL COLLEGES COULD DETERMINE COMMON VARIABLES AND CODING SYSTEMS IN DEVELOPING NORMATIVE STUDIES. (2) QUESTIONNAIRE SURVEYS SHOULD BE BASED ON RANDOM SAMPLES WITH VIGOROUS FOLLOWUP OF NONRESPONDENTS. (3) USE OF MULTIPLE-CHOICE RESPONSE ITEMS FACILITATES MECHANICAL PROCESSING. IMPROVEMENT OF RESEARCH METHODOLOGY WILL NOT DEEMPHASIZE THE JUNIOR COLLEGE TEACHING FUNCTION, AND IT WILL PROVIDE MORE MEANINGFUL DATA FOR THE INSTITUTION AND THE ENTIRE FIELD. THIS ARTICLE WAS PUBLISHED IN "JUNIOR COLLEGE RESEARCH REVIEW," VOLUME 1, NUMBER 4, MAY 1967. (HS)

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Volume 1, Number 4

JUNIOR COLLEGE RESEARCH REVIEW

May, 1967

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

INSTITUTIONAL STUDIES OF JUNIOR COLLEGE STUDENTS

Since it began operation in the summer of 1966, the Clearinghouse for Junior College Information has acquired approximately 1,000 documents, most of which are studies produced by junior college staff members and research offices. The collection includes a few studies done by state agencies, by consulting firms, or by university students and professors, and some journal articles, but the initial thrust of the Clearinghouse has been to bring the fugitive literature of the field under control.

This issue of *Junior College Research Review* presents a methodological critique and some suggestions for strengthening procedures in one area of institutional research.

Typically, studies of junior college students, some of which were summarized in *Junior College Research Review* (Vol. 1, Nos. 1 and 2), present data about students in the same institution in which the study was conducted. In the main, junior colleges confine their research efforts to their own institutions—a fact consistent with their commitment to teach rather than to dissipate their efforts in basic research. Thus, most reports of research in the Clearinghouse collection can be described with the following terms:

Report type:	"institutional research"
Research design:	"comparative study"
Sampling:	"population (no sample)"
Data collection:	"records search"
Analysis:	"interpretation of tables"
Data presentation:	"frequency counts" and "contingency tables"

The report-type term, "institutional research," is assigned because the study is often of relevance only to those involved in the programs of that particular junior college and is not of general interest to the field.

The design term, "comparative study," is assigned because, typically, the groups of subjects of the study are defined at the junior college and those groups do not have precise meaning anywhere else. For instance, students from XYZ junior college are sorted by "major" as defined at XYZ junior college, and the mean grade-point average (g.p.a.) for each group at one or more senior colleges is computed. "Major" is subject to widely varying interpretations—major in the junior college, declared intent to major in the senior institution, inference of major by course pattern, and so on. And interinstitutional comparison of grade-point averages is always a hazardous undertaking.

The sampling term, "population (no sample)," is assigned because the junior college investigator has, for the entire group of his study, the records he intends to use; he need not draw samples, random or otherwise, from that defined population of records (subjects).

The data-collection term, "records search," is assigned because the investigator usually goes to the registrar's grade records and copies out (either by clerical or electronic methods) the records for the subjects of his interest.

The analysis term, "interpretation of tables," is assigned because the document typically presents contingency tables of mean grade-point averages for students in different majors, and concludes: "The mean g.p.a. at the senior college is higher for some majors than it is for others." Variance (standard deviation) of the distributions or measure of association of variables (e.g., *phi*-coefficient) are rarely reported.

The data-presentation terms, "frequency counts," "contingency tables," are assigned because the investigator usually presents his data in those forms.

Researches of the type described above are useful to the individual institution, and are therefore worth continuing, for they lend data which is potentially of some use in program planning. But with a little more care, research could be addressed to questions more varied than "What is the mean g.p.a. of students from XYZ junior college at ABC senior college?"

Three suggestions are presented below:

1) A design term, "normative study," is used to describe studies that report on groups defined in the same way at more than one institution; normative studies permit comparisons between institutions.

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At small extra effort, several junior colleges might agree on common coding and collection of data items (variables) in their respective searches. After each junior college has produced a comparative study in this manner, the comparative studies could be assembled to provide normative information.

2) Another question junior colleges may want to ask is: "How well did your training at our junior college prepare you for your present occupation?" This question, generally, must be asked of graduates not in school at the time the data is collected. The method of data collection often used in such studies is to mail questionnaires to all students who graduated in a given year in a given field and then analyze the returns; but this technique produces a self-selected sample—those who return the questionnaire are different, at least in that way, from those who do not. Such a sample, even if 50 percent of the questionnaires are returned, is biased. One gets more trustworthy information if he draws a truly random sample of 100 graduates and pursues nonrespondents until he has a 95 percent response than he gets when he mails 2,000 questionnaires and then simply counts the returns.

3) Junior colleges may want to ask questions about their students other than "How well are they doing (g.p.a.) here?" The records search as a technique of data collection is, in general, inadequate to answer those other types of questions. One study that might be valuable would seek to determine effect. It would ask, for example, "How well did you like *X* program at our junior college last summer?" This question could be asked of students still enrolled in the junior college. One technique for data collection from students still enrolled is presented below:

a) Compile a list of ten questions about the junor college and its programs worded so that a multiple-choice response is appropriate; assign each question a number.

b) Print the questions, one question per card, on the face of IBM cards that have bubbles for mark-sensing.

c) If the enrollment is 1,000, produce 100 cards for each of the ten questions.

d) Punch the question number and a random number into each of the 1,000 cards.

e) Order the 1,000 cards on the random-number field in an IBM card sorter. The questions are thus in random order, and it makes no difference which student gets which card.

f) Require each student to answer one question (mark the mark-sense bubble on one card) as part of his registration procedure.

g) Process mark-sense responses in an IBM 519 reproducing punch with mark-sense attachment.

h) Sort the cards on the question-number field so that all cards bearing the same question are in the same group.

i) Count the responses to each question on an IBM sorter with counter attachment.

Variations on this technique are possible; enough cards can be produced so that each student can answer one, two, or three questions. All cards can carry additional mark-sense bubbles in which the student indicates his sex, age, college status, or other data. Reports can show response to questions by students in categories or in combinations of categories. Because of the random assignment of items to respondents, the statistical assumptions are met which allow tests of significance on differences between group mean responses. Although only a few students have answered any one question, one can infer statistically that the mean response for the sample of students estimates the mean response for the entire population.

These suggestions point to ways that research in the junior colleges can provide more information—and more reliable information—at little extra cost to any junior college. Standardized data collection and random sampling do not force a junior college from its primary interest in its own operation. The results obtained, however, gain meaning for the institution which conducts the study and, just as important, provide data useful to the entire field.

Jack Thomson

UNIVERSITY OF CALIF.
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JUN 12 1967

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Abstracts of all studies mentioned in *Junior College Research Review* may be obtained from the Clearinghouse on request. We will search the collection to fit your specialized need for information.

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TITLE

100 EVALUATION OF THE THRESHOLD PROGRAM AT LOS ANGELES VALLEY COLLEGE,
101 SECOND REPORT.
102
103

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RETRIEVAL TERMS

600 *JUNIOR COLLEGES, SPECIAL PROGRAMS, STUDENT OPINION,
601 STUDENT ATTITUDES, ACHIEVEMENT, ABILITY IDENTIFICATION,
602 *LOW ABILITY STUDENTS,
603
604
605
606

IDENTIFIERS

607 VAN NUYS, CALIF., SCHOOL AND COLLEGE ABILITY TEST.

ABSTRACT

800 DURING A 3-SEMESTER PERIOD, STUDENTS WITH SCHOOL AND COLLEGE
801 ABILITY TEST SCORES BELOW THE 17TH PERCENTILE WERE ENROLLED ON
802 A VOLUNTARY BASIS IN SPECIAL CLASSES IN ENGLISH, SPEECH, AND
803 PSYCHOLOGY, PLUS ONE ELECTIVE. CONTROL GROUPS FOR COMPARISON
804 WERE SELECTED RANDOMLY FROM OTHER STUDENTS IN THE SAME SCAT GROUP.
805 MORALE IN THESE "THRESHOLD" CLASSES HAS BEEN REPORTED AS EXCELLENT,
806 THOUGH SOME STUDENTS HAVE SHOWN PATTERNS OF EXCESSIVE ABSENCE.
807 STANDARDIZED ACHIEVEMENT TESTS DO NOT SHOW SIGNIFICANT GAINS, BUT
808 THE AUTHOR NOTES THAT THESE DO NOT VALIDLY MEASURE ACHIEVEMENT OF
809 COURSE OBJECTIVES INVOLVED. BY THE BEGINNING OF THE FOURTH
810 SEMESTER AFTER ENTRANCE, 11.7 PERCENT OF THE "THRESHOLD" GROUP
811 AND 6.5 PERCENT OF THE CONTROL GROUP WERE STILL IN SCHOOL.
812 RELATIVELY FEW OF THE STUDY OR CONTROL GROUP ACHIEVED A 2.0
813 GRADE POINT AVERAGE. STUDENT SATISFACTION WITH THE PROGRAM SEEMS
814 GENERALLY GOOD. MOST WHO COMPLETED THE SEMESTER DID NOT CHANGE
815 THEIR OBJECTIVES, THOUGH THE AUTHOR COMMENTS THAT THOSE WHO DROPPED
816 FROM THE PROGRAM MAY HAVE REEVALUATED THEIR GOALS IN A REALISTIC
817 MANNER. THE AUTHOR CONCLUDES THAT. SINCE ONLY A FEW OF THESE
818 STUDENTS REMAIN IN SCHOOL 3 OR MORE SEMESTERS, THE COLLEGE MUST
819 RECOGNIZE AND SERVE THEIR EDUCATIONAL NEEDS WHILE THEY ARE IN
820 SCHOOL. (WO)
821
822

Above is an example of an ERIC Report Resume produced at the Clearinghouse for Junior College Information.

Copies of Report Resumes for any document in the collection may be obtained on request.

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